

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-13 are presently pending in this case. Claims 1 and 12 are amended and new Claim 13 is added by the present amendment. As amended Claims 1 and 12 and new Claim 13 are supported by the original disclosure,¹ no new matter is added.

In the outstanding Official Action, Claims 1-12 were rejected under 35 U.S.C. §103(a) as unpatentable over Tanio (U.S. Patent No. 5,930,389) in view of Mizuyama et al. (U.S. Patent No. 6,813,043, hereinafter “Mizuyama”).

The outstanding rejection is respectfully traversed.

Amended Claim 1 recites in part:

an image data converting unit configured to convert a format of image data from a first format to a second format, said first format and said second format each being one of NFC1, K4, K8, JPEG, RJ2K, a four-value format, a binary format, an eight-value format, and an MH/MR/MMR format

Tanio describes an image processing apparatus that converts an image from a first color space to a second color space. The outstanding Office Action conceded that color conversion circuit 304 of Tanio as “an image data converting unit configured to convert a format of image data from a first format to a second format, said first format and said second format each being one of a multi-value format, a four-value format, a binary format, an eight-value format, and an MH/MR/MMR format” as recited in Claim 1, and cited Mizuyama as describing an image data converting unit configured to convert from a multi-value format.² However, it is respectfully submitted that Mizuyama does not teach or suggest an image data converting unit configured to convert a format of image data from a first format to a second

¹See, e.g., the specification at page 19, lines 13-20, page 20, lines 9-25, page 21, line 13 to page 22, line 7, page 24, lines 11-18, and Figures 5 and 13.

²See the outstanding Office Action at page 4, line 9 and page 5, line 19.

format, said first format and said second format each being one of NFC1, K4, K8, JPEG, RJ2K, a four-value format, a binary format, an eight-value format, and an MH/MR/MMR format as recited in amended Claim 1. In fact, it is respectfully submitted that Mizuyama does not describe any of the formats presently recited in Claim 1. Thus, the proposed combination does teach or suggest “an image data converting unit” as defined in amended Claim 1. Consequently, Claim 1 (and Claims 2-11 dependent therefrom) is patentable over Tanio in view of Mizuyama.

Amended Claim 12 recites in part:

unifying a plurality of formats of image data to a single format by converting the formats of image data by hardware, said single format being one of NFC1, K4, K8, JPEG, RJ2K, a four-value format, a binary format, an eight-value format, and an MH/MR/MMR format.

As noted above, the outstanding Office Action conceded that Tanio does not teach or suggest this feature, and Mizuyama does not describe any of the formats presently recited in Claim 1. Thus, it is respectfully submitted that the proposed combination does not teach “unifying a plurality of formats of image data to a single format” as defined in amended Claim 12. Consequently, Claim 12 is also patentable over Tanio in view of Mizuyama.

New Claim 13 is supported at least by the specification at page 19, lines 13-20, page 20, lines 9-25, page 21, line 13 to page 22, line 7, page 24, lines 11-18, and Figures 5 and 13.

New Claim 13 recites in part:

a plurality of image data converting units configured to convert a format of image data by hardware, each of the image data converting unit configured to convert a format of image data by decoding the image data according to parameters that are set, ***to perform multi-value conversion and resizing of the decoded image data to produce processed image data***, and to compress the processed image data; and

a format unifying unit configured to unify a plurality of formats of image data corresponding to respective images by utilizing the image data converting units, the format unifying unit including a plurality of conversion executing units which correspond to the image data converting units respectively, the

format unifying unit configured to set predetermined parameters in the image data converting units and to assign the conversion executing units in one-to-one correspondence to respective images to convert the image data corresponding to respective images in parallel into a unified image format.

Thus, the invention recited in Claim 13 includes a plurality of image data converting units that perform multi-value conversion and resizing of the decoded image data to produce processed image. As noted in the specification at page 28, line 20 to page 29, line 3, a device including such an image data converting unit can perform resizing and conversion at the same time. If conversion is performed after resetting is done, this is time-consuming and requires access memory areas for the resizing process and for allocation to the conversion process. The use of an image data converting units as recited in Claim 13 improves the use of memory space and conversion speed.

Further, as noted in the specification at page 33, lines 17-22, the use of an image data converting units such as recited in Claim 13 provides for efficient consolidation of printer format image data and copier format image data into facsimile format image data.

In contrast, it is respectfully submitted that neither Tanio in view of Mizuyama teach or suggest “a plurality of image data converting units” and “a format unifying unit” as recited in new Claim 13. Consequently, new Claim 13 is also patentable over Tanio in view of Mizuyama.

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Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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